Ministry of Economic Development
Manatū Ōhanga
Intellectual Property Office of New Zealand

PCT/NZ03/00190

CERTIFICATE

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 27 May 2002 with an application for Letters Patent number 519162 made by STEPHEN ROSS HOPE and ROBERT JOHN WELCOME and JASON ROBERT JONES.

I further certify that the Provisional Specification has since been postdated to 27 August 2002 under Section 12(3) of the Patents Act 1953.

Dated 10 September 2003.

COMMISSIONER OF PATENTS, TRADEMARKS & DESIGNS
NEW ZEALAND

Neville Harris
Commissioner of Patents, Trade Marks and Designs

330 High Street, Lower Hutt and 17 Toop Street, Seaview
PO Box 30687, Lower Hutt, New Zealand or DX SX 11129, Wellington

519162

POST-DATED UNDER SECT. 12(3)
TO 27 AUG 2002

PATENTS FORM NO. 4
Appln Fee: $50.00

PATENTS ACT 1953
PROVISIONAL SPECIFICATION

AN IMPROVED ABRASIVE HOLDER

I Stephen Ross Hope, a New Zealand Citizen of 20 Sea Spray Drive, Bucklands Beach, Auckland, New Zealand

And Robert John Welcome, a New Zealand Citizen of 69 O'Halloran Road, Howick, Auckland, New Zealand

And Jason Robert Jones, a New Zealand Resident of 62 H Wellington Street, Howick, Auckland, New Zealand.

do hereby declare this invention to be described in the following statement:

AN IMPROVED ABRASIVE HOLDER

Technical Field

This invention relates to a series of sanding tools.

Background Art

Present sanding tools are widely known and available in a variety of shapes and sizes to suit their application or desired use.

These sanding tools are available in three main styles and designs, having either screw down clips to allow sandpaper abrasives to be wrapped around the ends of the tool and clamped onto the tools by and with these screw down clamps, or, sanders with Velcro hook and claw systems to hold abrasives to the sanding tool, or, sanding tools with various foam pads glued to the bottom of the tool which foam pads are generally made from Ethyl Vinyl Acetate (EVA), where the skin side of the EVA is used to allow abrasives having pressure sensitive adhesive applied to the underside of the abrasive to allow it to stick to the EVA foam.

Problems with current sanding tools are, that the tool with the screw down clamps makes it slow to apply and fit sandpaper abrasives to the tool, and causes much waste of sandpaper where the abrasive wraps around the ends of the tools, the Velcro hook and claw system of holding abrasives to a sanding tool is very expensive and price prohibitive, and the tool system having EVA is problematic due to lack of available EVA skin material to meet demand for product since EVA with one shiny skin face is the off-cut from batch EVA, and availability of this EVA material is not consistent with product demand.

It is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

Further aspects and advantages of the present invention will become apparent from the ensuing description, which is given by way of example only.

Disclosure of Invention

According to one aspect of the present invention there is provided a series of sanding tools having square, rectangular, triangular, oval, or any suitable shaped base which Ethyl Vinyl Acetate (EVA) foam, or, Polyethylene (PE) foam, or any other suitable foam can be glued or attached to the bottom of the base of the ABRASIVE HOLDER, which tools would normally but not necessarily have a handle attached to the upper side of the ABRASIVE HOLDER tool by which to push, pull, and move ABRASIVE HOLDER to perform sanding with the present invention. The EVA foam, or PE foam, or any other suitable foam will have a suitable plastic film such as Polyethylene film, or any other suitable film which can be laminated to the foam, and where this laminated film creates a much more durable surface on the EVA foam onto which abrasives coated with any suitable pressure sensitive adhesive can be stuck and applied to the laminated surface of the foam, and whereby this pressure sensitive adhesive backed sandpaper abrasive can be easily peeled off and released from the film laminated side of the foam. The film being laminated to the foam can also be imprinted with branding or any suitable printed information on the side of the film to be laminated to the foam, creating branding that is free from wear and tear or damage. The EVA or other suitable foam being glued to the present invention can be of any suitable thickness from one millimeter thick to twenty five millimeters thick, but is not limited to this thickness range, as the desired thickness for the foam having laminated film could be below one millimeter in thickness or over twenty five millimeter in thickness as desired. One further application of the present invention will be to offer a suitable flat or handled sanding tool for the purpose of filing human nails, or, animal nails or hoofs, whereby abrasives can be applied to this design option of the present invention, then peeled back off the present invention and replaced when the pressure

sensitive adhesive backed abrasive is either worn out, or where a different grit grade of abrasives is desired to be fitted to the present invention. While it is desirable to create suitable EVA or other suitable foam with at least one or more faces having suitable PE or other suitable film laminated to it, the foam could also have any suitable coating applied to any of its surfaces which would create a surface suitable for attaching, sticking and removing abrasives having a suitable pressure sensitive adhesive applied to the under side of the abrasives on the opposite side to the girt side of said abrasives, and where such pressure sensitive adhesive backed abrasives would have any suitable and removable waxed paper, or any other suitable removable protective backing paper or film applied to said abrasives. Another aspect of the present invention is to offer abrasive holders that have adjustable bases, whereby the abrasive holder may have a base that can be adjusted create a curve either concave or convex to conform to fit any curved surface desired, to be sanded by and with the aid of the present invention. The present invention is not limited to hand tools as this technology can also be used in electric sanding tools. Because this technology is based on the film lamination to a sanding tool or the foam attached to a sanding tool, this film lamination can also be applied to any sanding tool whereby laminating plastic film directly to the bottom base of said sanding tool would allow sandpaper abrasives coated on one side of the abrasive to stick to the tool, and where the tool may be made entirely from rubber, synthetic compound, cork, or any other suitable material including composite materials.

Brief Description of Drawingssuitable

Further aspects of the present invention will become apparent from the following description, which is given by way of example only and with reference to the accompanying drawings in which:

Figure 1 shows one aspect of the present invention having (1), a handle, (2) a flat rectangular base for which to attach by gluing or other suitable method

any suitable foam material, (3), an EVA foam pad or other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 2 shows another aspect of the present invention having (1), a handle, (2), a flat rectangular base for which to attach by gluing or other suitable method any suitable foam material, (3), an EVA foam pad or other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied

to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 3 shows another aspect of the present invention having (13), a swivel handle, 2 a flat base of rectangular shape for which to attach by gluing or other suitable method any suitable foam material, (3), an EVA foam pad or other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 4 shows another aspect of the present invention having (1), a handle, 2 a flat base of rectangular shape for which to attach by gluing or other suitable method any suitable foam material, (3), an EVA foam pad or

other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 5 shows another aspect of the present invention having (1), a handle, 2 a flat triangular base for which to attach by gluing or other suitable method any suitable foam material, (3), an EVA foam pad or other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by

peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 6 shows another aspect of the present invention having (1b), a handle, and (2b), a flat rectangular base that can be bent or adjusted by adjustment screws (7), and pin (9), and nut (10), and locking lugs (8) to allow this version of present invention to sand a concave curved surface, and which rectangular base (2b) will have EVA or other suitable foam material attached by gluing, or other suitable method of attaching suitable foam material, and (3), an EVA foam pad or any other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 7 shows another aspect of the present invention having (1c), a handle, and (2c), a flat rectangular base that can be bent or adjusted by adjustment screws (11), and pin (9), and nut (10), and locking device (14) to allow this version of present invention to sand a convex curved surface, and which rectangular base (2c) will have EVA or other suitable foam material attached by gluing, or other suitable method of attaching suitable foam material, and (3), an EVA foam pad or any other suitable foam pad material of between point .5 millimeters thick and 25 millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper, can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling the abrasive sandpaper off film (4) as required.

Figure 8 shows another aspect of the present invention suitable for sanding human nails or animal nails of hoofs depending on desired size, having (12), a handle, and (2) a flat thin base with rounded or square or other shaped ends, for which to attach by gluing or other suitable method any suitable foam material, and having (3), an EVA foam pad or other suitable foam pad material of between point .5 millimeters thick and 25

millimeters thickness as desired, and of any suitable density ranging from 20–200plus kg\m3 as desired, and having (4), a Polyethylene plastic film or any other suitable plastic or other type of film suitably attached to the underside of foam pad (3) which film (4) would normally be attached to foam pad (3) by gluing with any suitable glue, or heat laminating or other system of laminating process as desired to attach and permanently affix film (4) onto foam (3), whereby abrasive sandpaper having a suitable a pressure sensitive adhesive (PSA), applied to one side of the abrasive sandpaper can be attached to film (4) by peeling the protective backing paper from the PSA side of the attachable abrasive sandpaper, and sticking said sandpaper to foam pad (3) having film (4) applied to at least one side of foam (3), and whereby said sandpaper can be easily releasable from film (4) by peeling said abrasive sandpaper off film (4) as required.

Figure 9 shows another aspect of the present invention (15) having a solid or composite body made entirely from EVA, or Polyethylene, or rubber, or cork, or composite materials, or any other suitable materials, and where film (4) can be laminated directly to the flat base of this variant of the present invention, or to one of more faces of the abrasive holder, to which abrasives having pressure sensitive adhesive applied to one side can be stuck to, and easily removable from, the present invention.

Best Modes for Carrying out the Invention

With reference to figure 1 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1) a handle, (2), a flat base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having

suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 2 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1) a handle, (2), a flat base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 3 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1) with a swivel handle (13), and (2), a flat base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 4 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1) a handle, (2), a flat base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having

suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 5 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1) a handle, (2), a flat base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 6 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1b) a handle, (2b), a flat bendable and adjustable base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2b) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 7 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (1c) a handle, (2c), a flat bendable and adjustable base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2c) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to

allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 8 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (12) a handle, (2), a flat stiff or flexible base to attach suitable foam material, (3) EVA or other suitable foam material to attach to base (2) and to which a suitably durable film (4) is glued of laminated onto foam (3), whereby film (4) is applied to foam (3) to allow abrasives sandpaper having suitable pressure sensitive adhesive applied to one side of the abrasive sandpaper, to easily allow said sandpaper to stick and hold fast to film (4) and which said sandpaper abrasive is easily releasable from film (4) by peeling said sandpaper off film (4) as and when required.

With reference to figure 9 there is shown one preferred section of a preferred embodiment of the present invention in the form of Abrasive Holder (15) where film (4) can be applied directly and permanently to the flat sanding face of the present invention, whereby PSA backed abrasive can be easily stuck to, and easily releasable and removable from film (4) on the present invention.

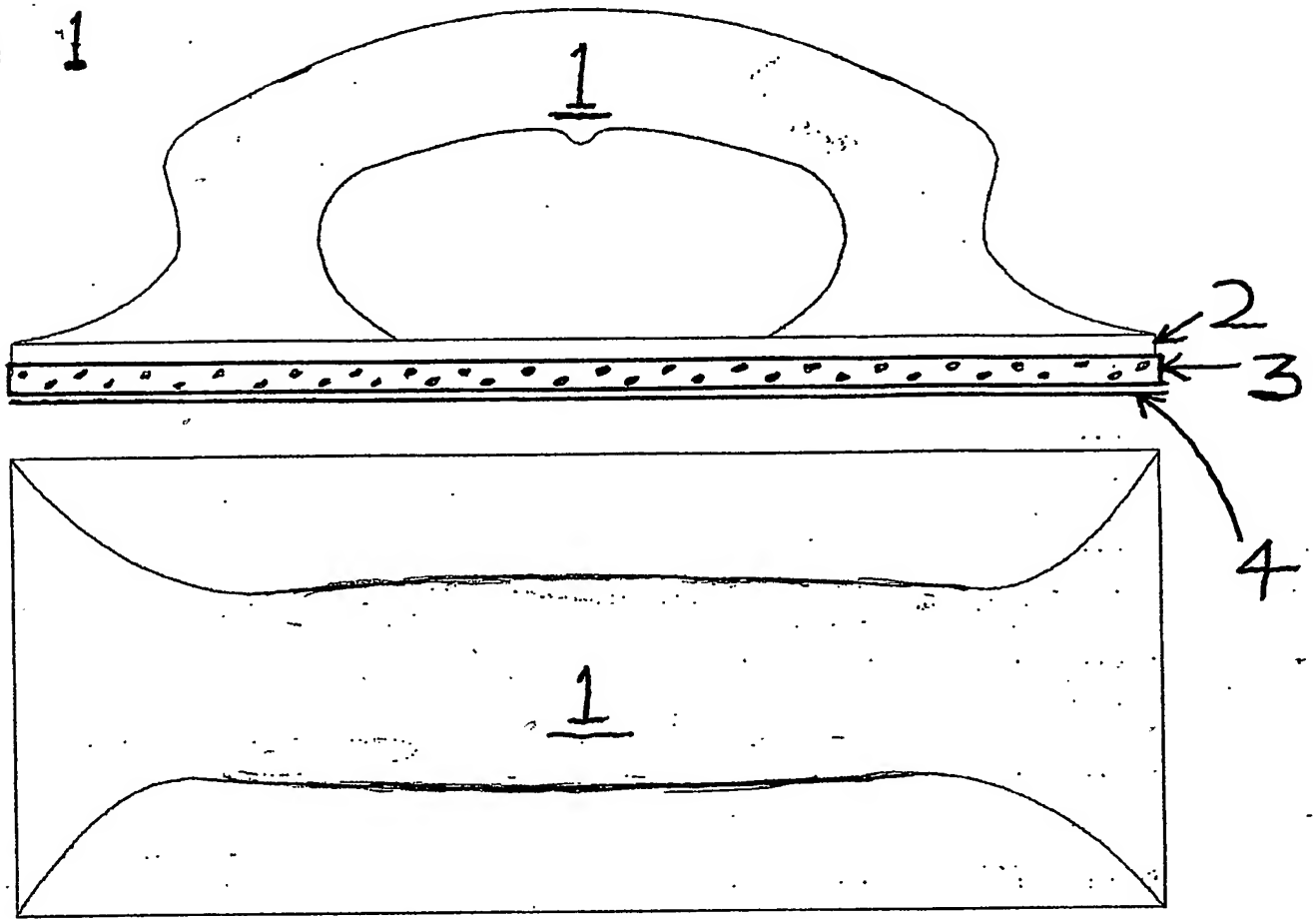
Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the scope thereof.

Stephen Ross Hope

Robert John Welcome

Jason Robert Jones

FIG 1



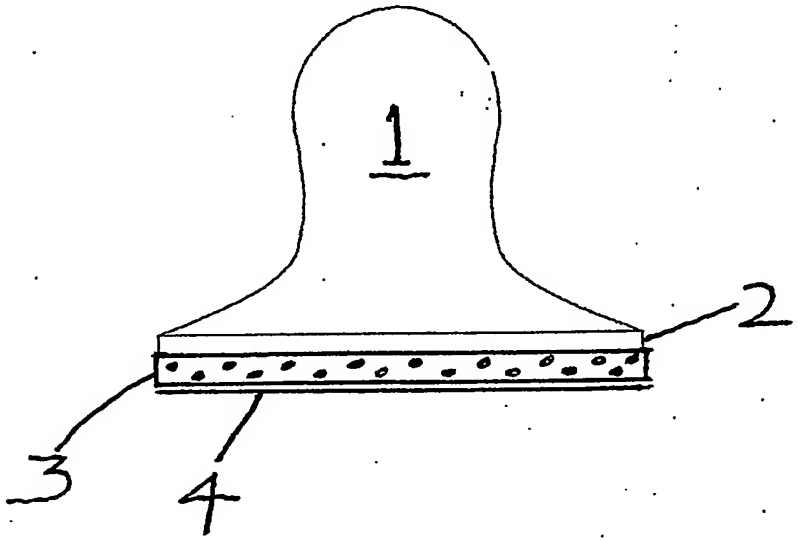
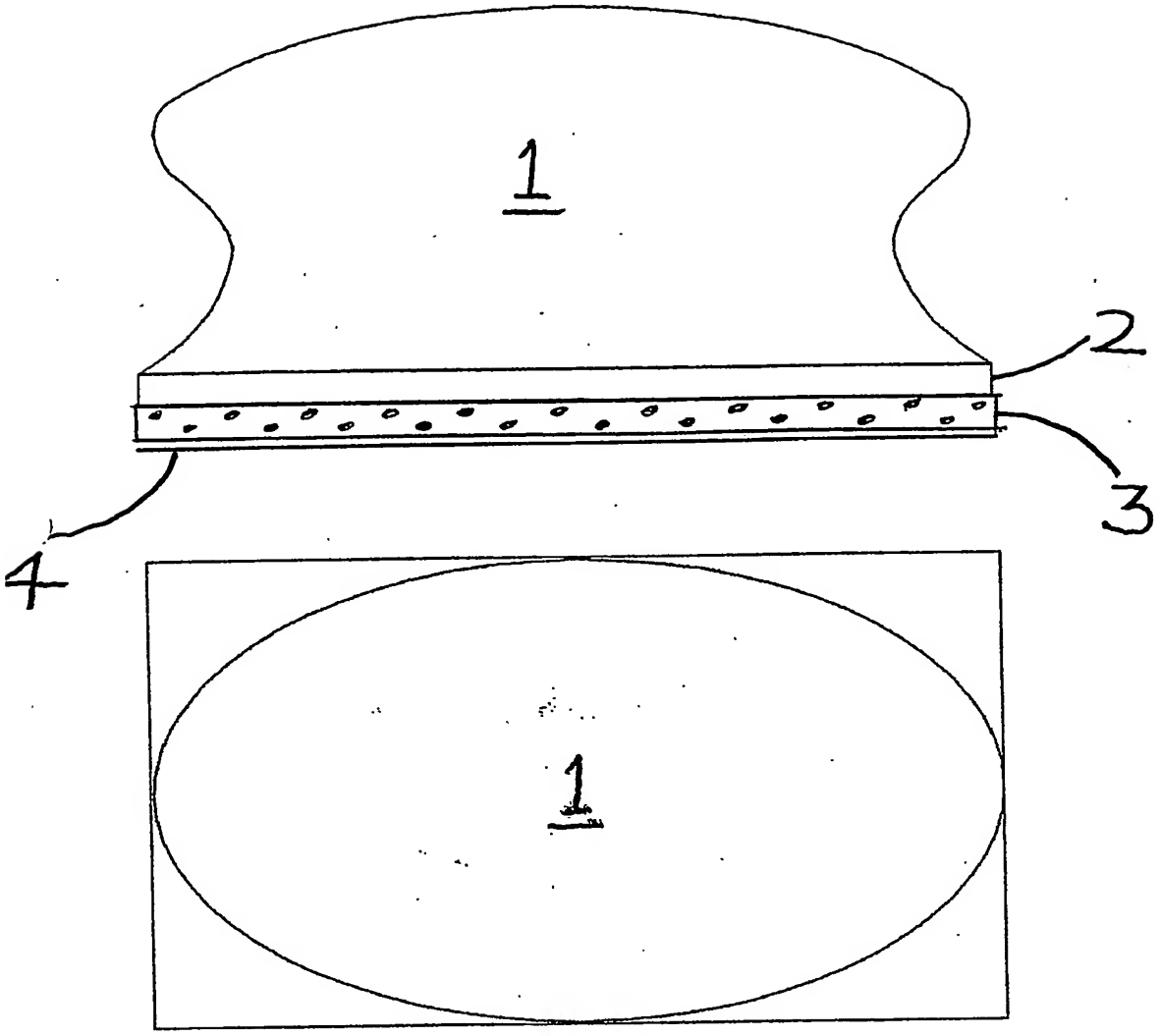


FIG 2



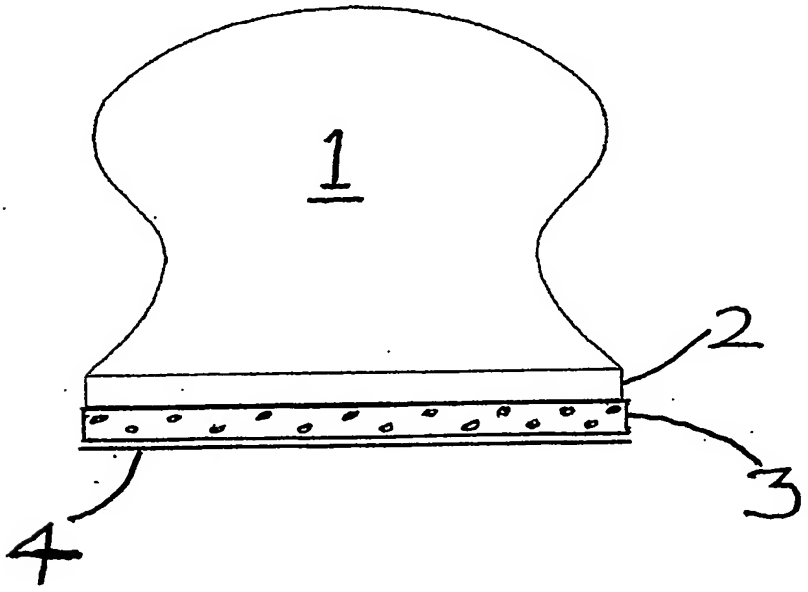
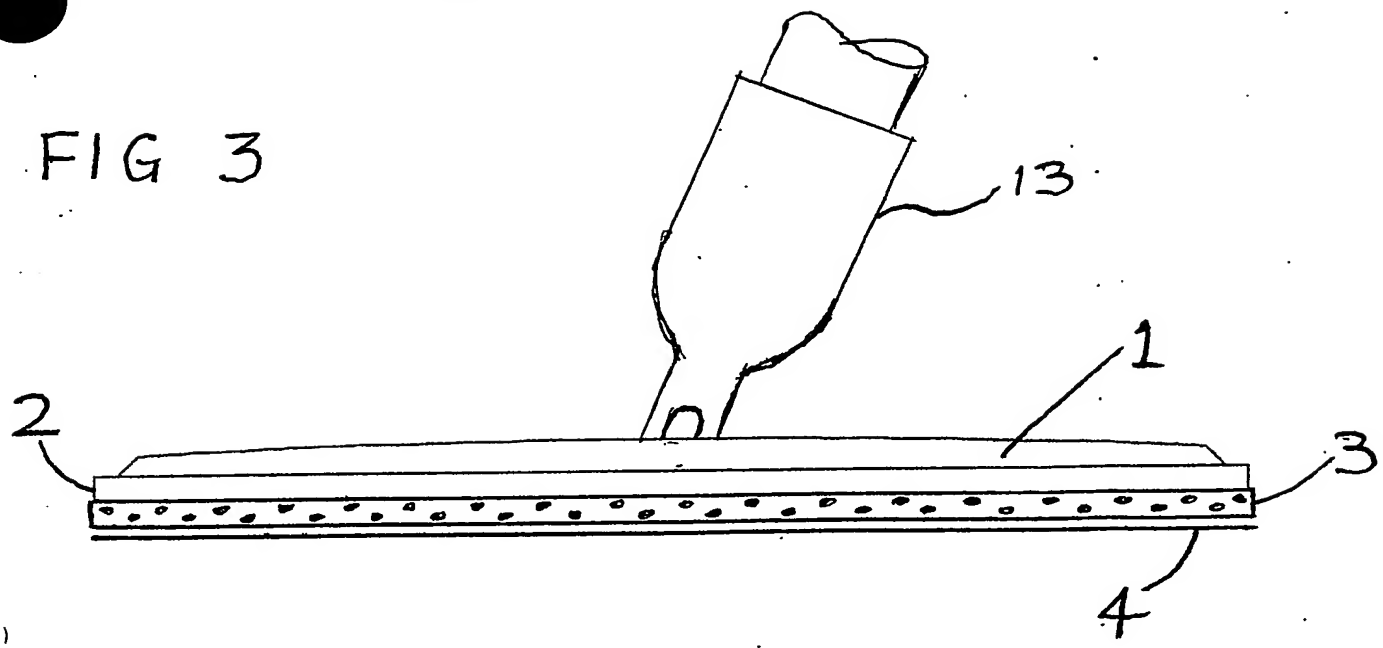
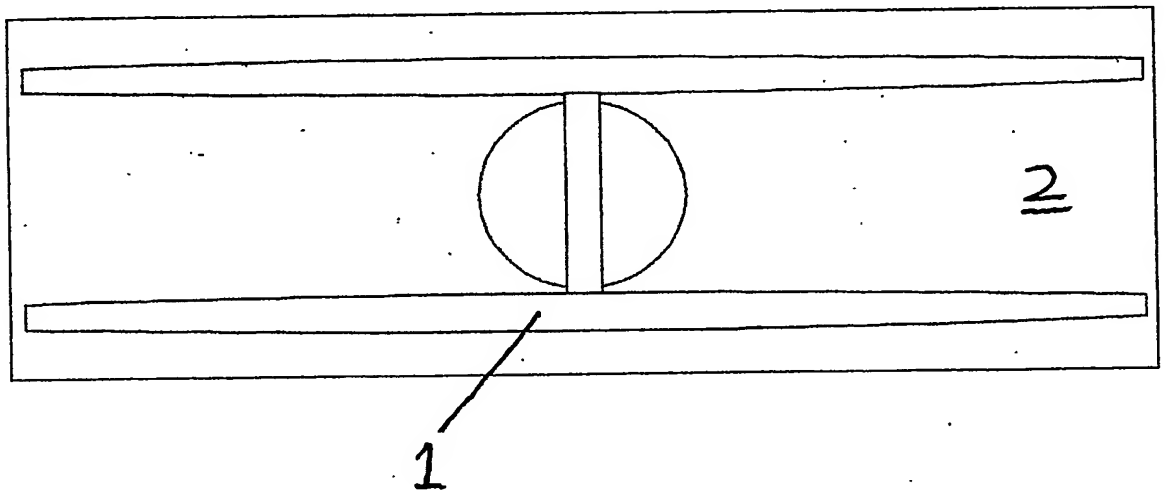


FIG 3





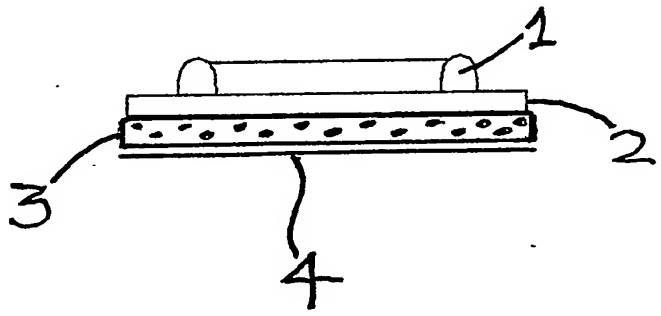
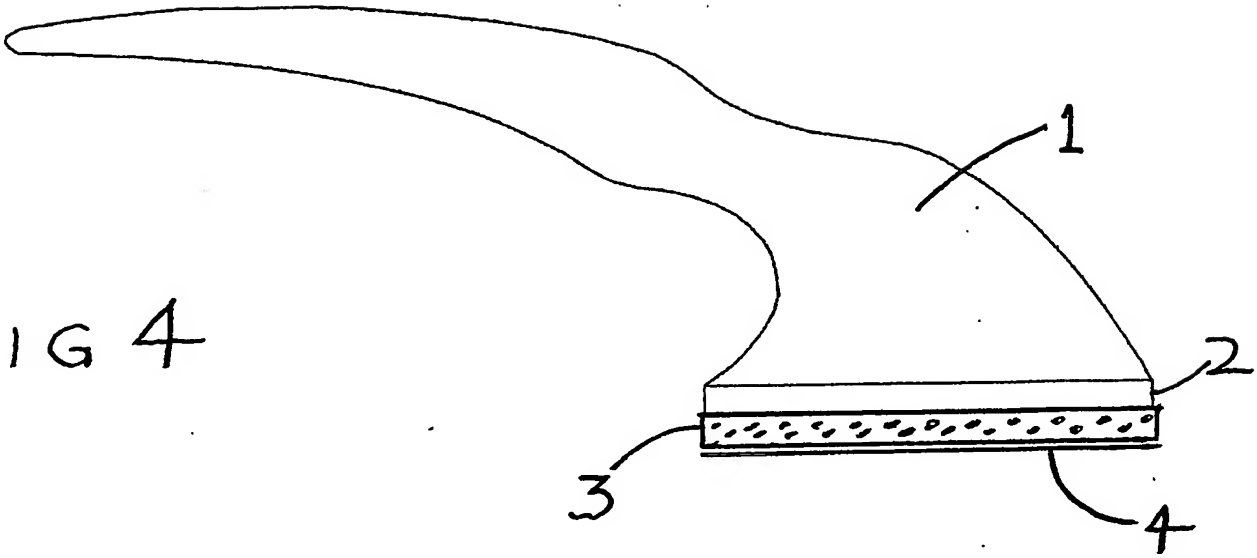
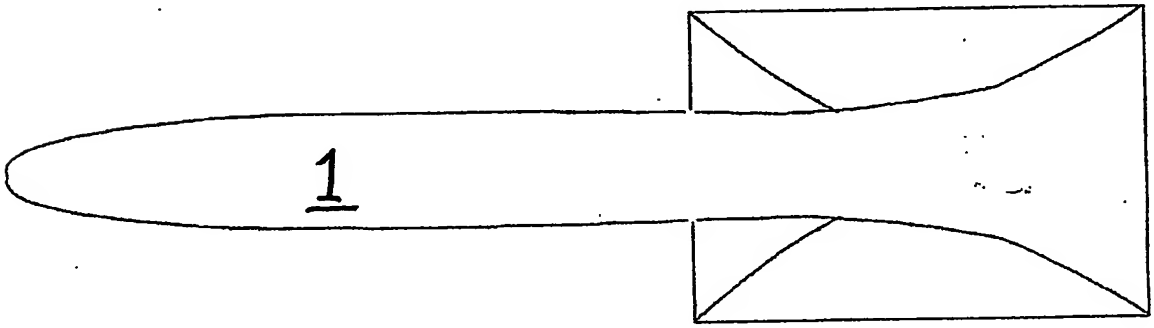


FIG 4





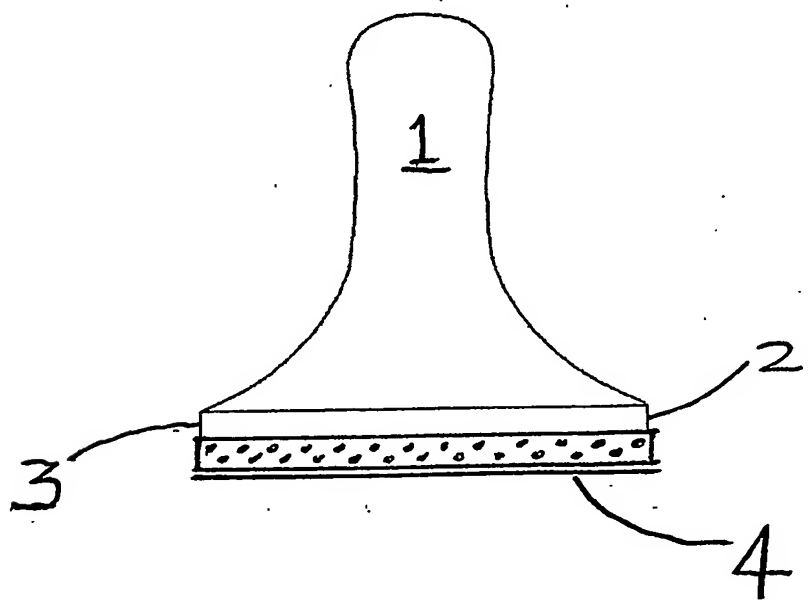
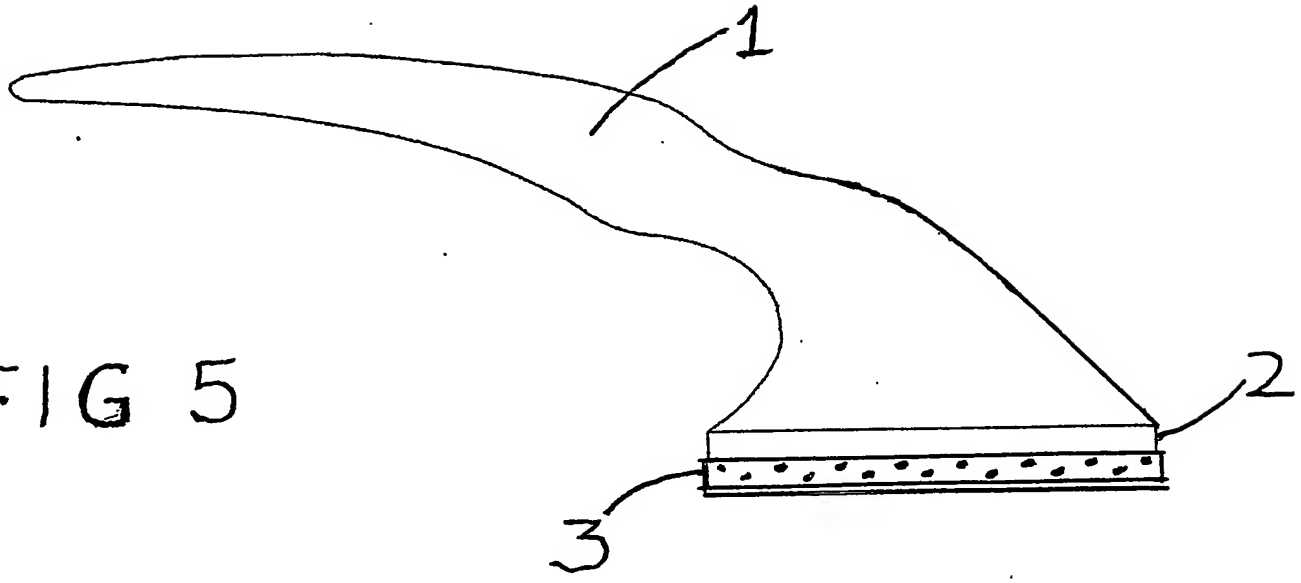
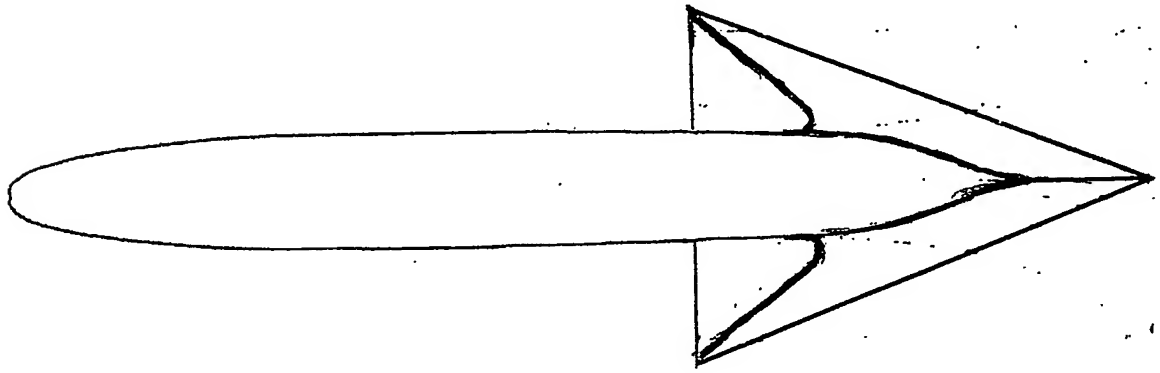


FIG 5





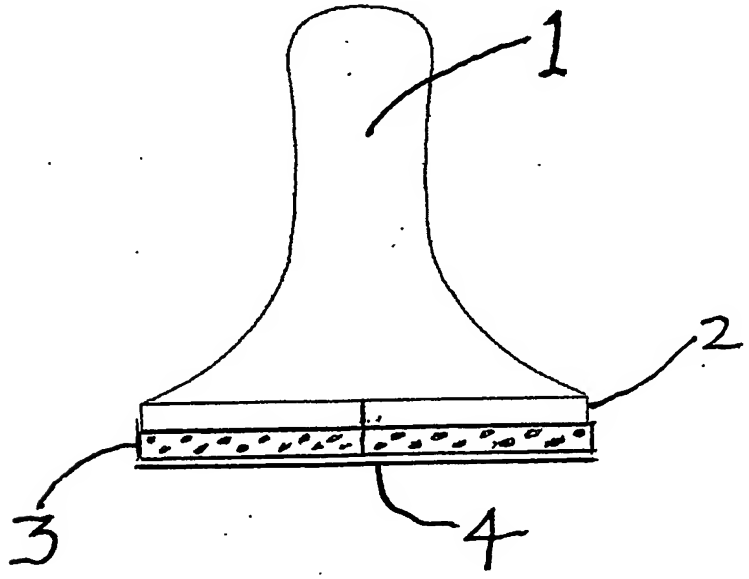


FIG 6

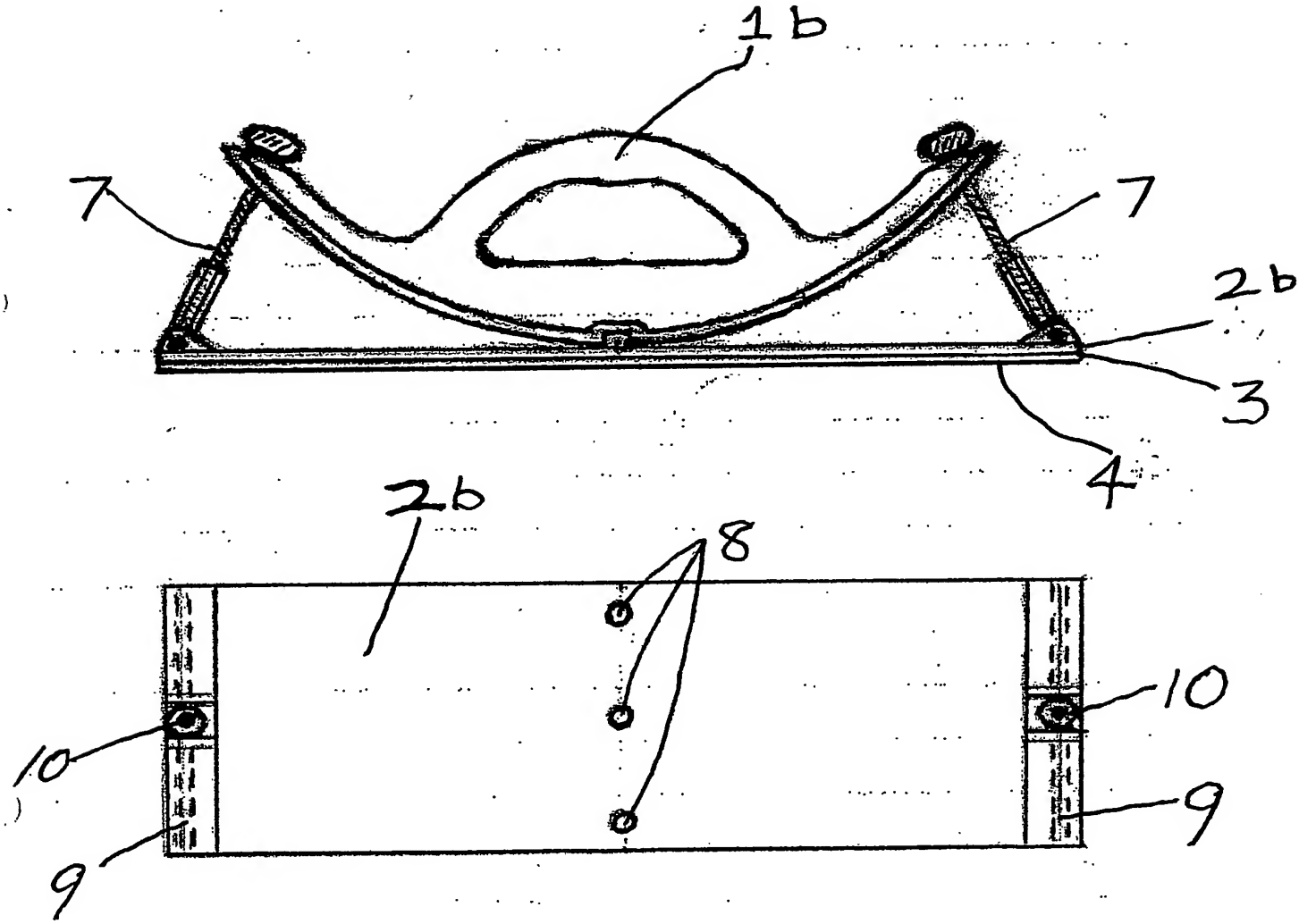


FIG. 7

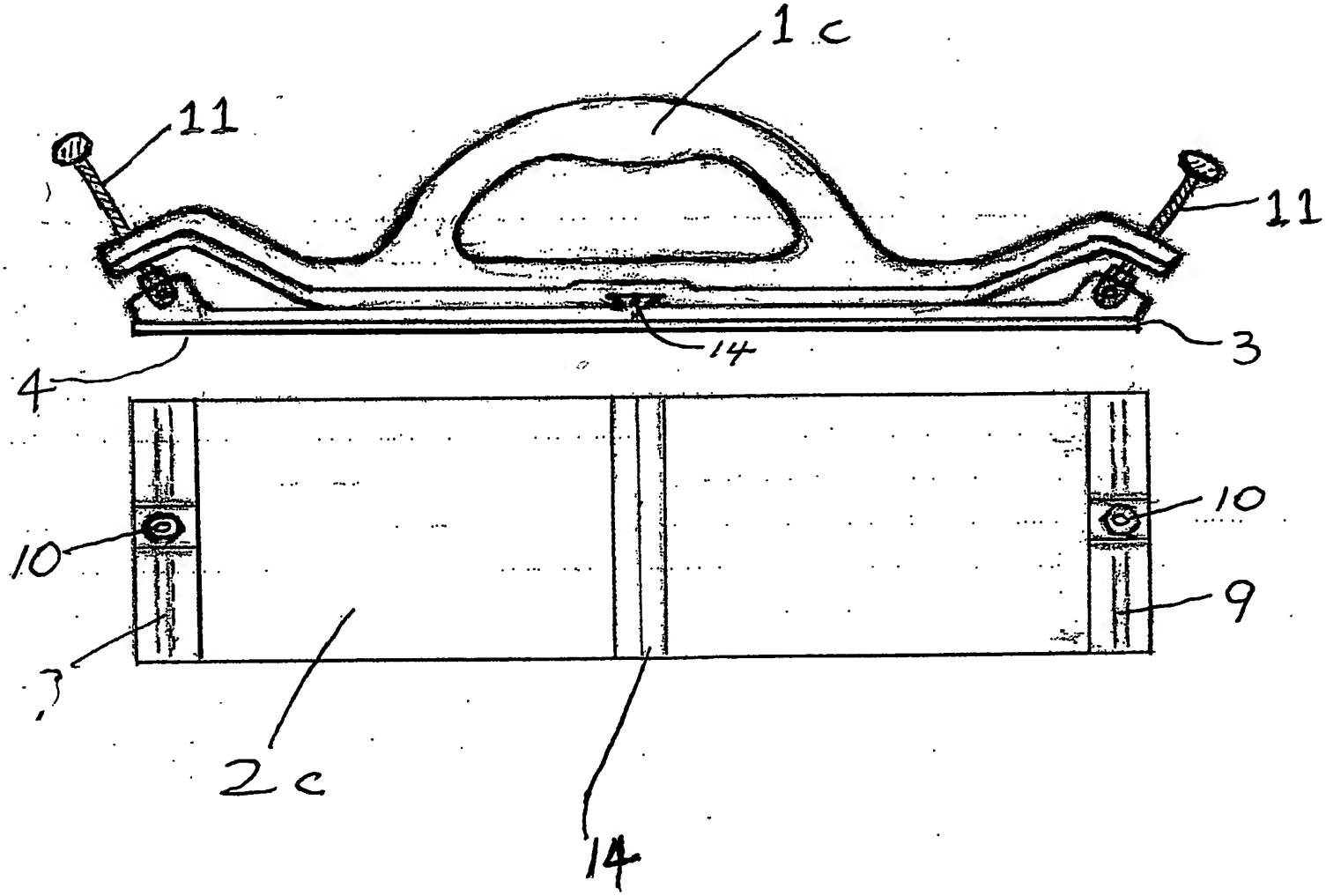
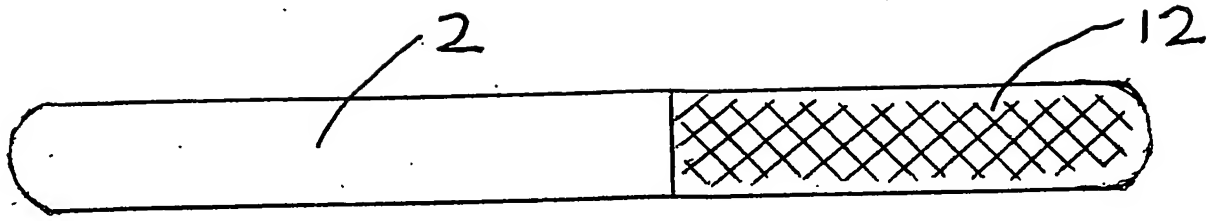


FIG 8



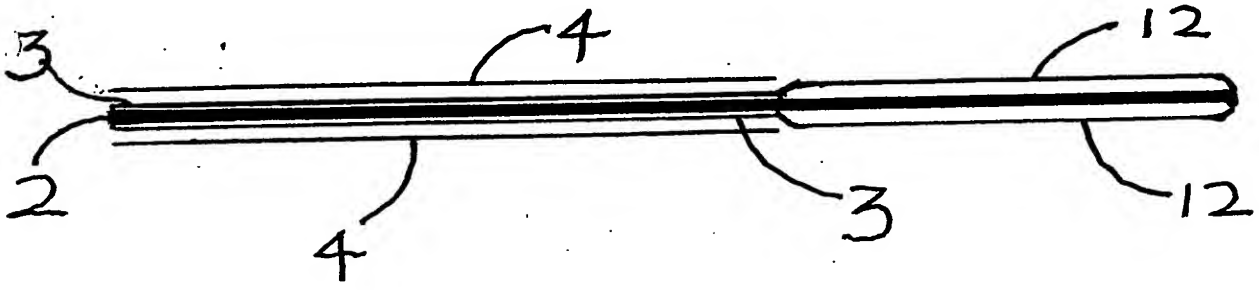


FIG 9